

REMARKS

This application has been carefully reviewed in light of the Office Action dated August 12, 2004. Claims 1 to 6, 8 to 10, 12 to 28, 30, 52 to 54, 58, 59 and 61 to 72 are in the application, of which Claims 1, 2, 23, 27, 62, 63, 64, 66 and 69 are independent. Claims 7, 11, 29, 31 to 51, 55 to 57 and 60 have been cancelled. Claims 64 to 72 have been newly added. Reconsideration and further examination are respectfully requested.

Initially, the Examiner is respectfully requested to consider and acknowledge the art cited in two Information Disclosure Statements: a first dated May 2, 2002, and a second dated November 18, 2004.

Claim 2 has been amended to correct the typographical error objected to in the Office Action.

Claims 5, 15 to 17, 35 and 45 to 47 were rejected under 35 U.S.C. § 112, second paragraph. In particular, the Office Action objected to the use of the phrase “such as” in Claims 5 and 35, and objected to the phrase “modules or fitters” in Claims 15 and 45. In this regard, the phrase “such as” has been removed from Claim 5, and the phrase “or fitters” has been removed from Claim 15. Claims 35 and 45 have been cancelled without prejudice or disclaimer of subject matter and without conceding the correctness of the rejections.

In addition, Claims 17, 23 to 26 and 47 were further rejected under 35 U.S.C. § 112, second paragraph as being omnibus claims. In this regard, Claim 17 has been amended to depend only from Claim 2, and Claim 23 has been rewritten in independent form. Claim 47 has been cancelled without prejudice or disclaimer of subject

matter and without conceding the correctness of the rejections. As such, based on the foregoing amendments and remarks, remaining Claims 5, 15 to 17, 23 to 26 and 35 are believed to comply with 35 U.S.C. § 112, second paragraph.

Claims 1 to 18, 23 to 58 and 60 to 63 were rejected under 35 U.S.C. § 102(e) over U.S. Patent No. 6,211,870 (Foster). Claims 19 to 22 and 59 were rejected under 35 U.S.C. § 102(e) over Foster, or in the alternative under 35 U.S.C. § 103(a) over Foster. The foregoing actions have been taken without prejudice or disclaimer of subject matter and without conceding the correctness of the rejections. Reconsideration and withdrawal of the rejections are respectfully requested.

The present invention relates to user interfaces, and more specifically to a user interface apparatus that enables a user to communicate with a processor-controlled machine. One aspect of the present invention lies in the creation of the user interface. A user interface provider within the user interface apparatus requests device descriptions that define all of the functions that the processor-controlled machine is capable of carrying out. Based on a received device description, the provider associates the functions of the processor-controlled machine with user interface elements and generates a user interface. In this way, the user interface apparatus is able to provide a user interface for multiple different processor-controlled machines. In addition, the user interface apparatus is able to generate a user interface itself that is tailored to functions that the processor-controlled machine is capable of carrying out.

With specific reference to the claims, independent Claim 1 recites a user interface apparatus for enabling a user to communicate with a processor-controlled

machine. The user interface apparatus includes a housing which contains a user interface provider. The user interface provider includes a data requestor, a receiver, a user interface element accessor, an associator, a generator, and a communicator. The data requestor is operable to request a device description defining all of the functions that the processor-controlled machine is capable of carrying out. The receiver is operable to receive, in response to the request from the data requestor, a device description for the processor-controlled machine. The user interface element accessor is operable to access user interface element data defining user interface elements that can be used to form a user interface. The associator is operable to associate the functions defined by the received device description data with user interface elements defined by the user interface element data. The generator is operable to generate user interface data defining a user interface using the user interface element data for the user interface elements associated by the associator with the functions defined by the device description. The communicator is operable to communicate with the processor-controlled machine to cause the processor-controlled machine to carry out a function selected by the user using the user interface generated by the generator.

Independent Claim 23 is a system claims that corresponds generally to the apparatus of independent Claim 1.

The applied art is not seen to disclose or suggest the features of independent Claims 1 and 23, and in particular, is not seen to disclose or suggest at least the features of (1) requesting a device description defining all of the functions that the processor-controlled machine is capable of carrying out, and receiving, in response to the

request, a device description for the processor-controlled machine, (2) generating user interface data defining a user interface using the user interface element data for the user interface elements associated with the functions defined by the device description, and (3) communicating with the processor-controlled machine to cause the processor-controlled machine to carry out a function selected by the user using the generated user interface.

Foster relates to a computer programmable remote control. Foster's remote control may be utilized for selecting designated functions in a plurality of remotely controllable multimedia processing units (see Abstract). Foster is seen to teach the use of control development software running on a general purpose computer to program the remote control. The programming process of Foster requires the user to first select the type of the multimedia unit whose remote control is to be emulated and then to name the multimedia unit to be controlled. Next the user inputs each individual command of a conventional remote control separately to the computer (Figs. 5, 6; column 9, lines 10 - 29). Once the user has caused all the control signals of the conventional remote control to be communicated to the computer, the user may manually edit the user interface on the computer by using a pointing device such as a mouse (see Fig. 10, column 10, line 65 - column 11, line 13).

Foster is not seen to teach requesting a device description defining all of the functions that the processor-controlled machine is capable of carrying out, and receiving, in response to the request, a device description for the processor-controlled machine. Rather, Foster is seen to teach that the commands of the remote-control are entered individually by a user.

In addition, Foster is not seen to teach a user interface apparatus that both generates a user interface and communicates with a processor-controlled machine. Rather, Foster is seen to teach that a general purpose computer, and not its programmable remote control, is used to generate the user interface.

Likewise, Foster is seen teach that a remote control, and not the general purpose computer, communicates with a processor-controlled machine.

Accordingly, based on the foregoing amendments and remarks, independent Claims 1 and 23 are believed to be allowable over the applied art.

Independent Claim 2 recites, in addition to the features set out in Claim 1, a preference provider providing pre-stored preference data regarding user interface element preferences, and a user interface element determiner operable to determine, using the user interface element option data and the pre-stored preference data, the user interface elements to be used to represent the functions of the processor-controlled machine. Accordingly, the generator of Claim 2 is operable to generate user interface data defining a user interface from the device description using the user interface element data for the user interface elements determined by the user interface determiner.

With regard to the preference provider and user interface determiner, the Office Action points to Foster's disclosure that a user may manually select and edit buttons during development of the user interface on the general purpose computer (Fig 10; column 11, lines 8-13). Foster is not seen to teach providing pre-stored preference data regarding user interface element preferences, muchless determining the user interface elements using pre-stored preference data. For these reasons, it is respectfully submitted that independent

Claim 2 is allowable, and is also allowable for the reasons discussed above with reference to independent Claims 1 and 23.

Independent Claim 27 recites, among other features, the features of independent Claim 1 and is believed to be allowable for the same reasons discussed above with reference to independent Claims 1 and 23.

Independent Claim 62 recites, among other features, the features of independent Claim 1 and is believed to be allowable for the same reasons discussed above with reference to independent Claims 1 and 23.

Independent Claim 63 recites, among other features, the features of independent Claim 2 and is believed to be allowable for the same reasons discussed above with reference to independent Claims 1, 2 and 23.

Independent Claims 64, 66 and 69 have been newly added and are believed to define additional allowable subject matter. These claims are all directed to the feature of generating user interfaces for processor-controlled machines. Consideration and examination are respectfully requested.

The other claims in the application are each dependent from the independent claims and are believed to be allowable over the applied references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

No other matters being raised, it is believed that the entire application is fully in condition for allowance, and such action is courteously solicited.

Applicant's undersigned attorney may be reached in our Costa Mesa,
California office at (714) 540-8700. All correspondence should continue to be directed to
our below-listed address.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael K. O'Neill", written over a horizontal line.

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